

## **Alaska Energy Cost Reduction Program**

**Grantee:** Alaska Power & Telephone Company

**Project Name:** Skagway / Dyea Line Extension

**Authority Contract Number** 2195137

### **Grant Project Completion Report**

#### **Background:**

Dyea is a small community approximately 10 miles by road from Skagway, Alaska. Skagway just achieved “organized” Borough status through the Local Boundary Commission process in December 2006 and Dyea’s total land area is located within the new Skagway Borough. Dyea is the “head” of the Chilkoot Trail, the primary feature of the Klondike National Historical Park. The National Park Service (NPS) presence in Skagway and Dyea started in 1976. The local NPS administrative offices were one of the first locations to indicate their desire to have power extended to their Dyea facilities, residences and Ranger Stations, in 2001. In addition to the NPS, there are approximately 20 landowners in Dyea Valley that also were un-served with power or telephone that had a desire to be connected to power from Skagway.

Prior to receiving our grant/loan funds, the applicant, Alaska Power & Telephone Co, worked diligently with the NPS to come up with a construction methodology that would preserve the wilderness and historical look in Dyea. The meetings with the NPS led AP&T to the decision that all the construction in Dyea Valley would have to be underground construction beyond the 5 mile mark. This resulted in higher project costs than would have been achievable with overhead construction. Over the course of the construction, 2 exceptions were necessary to the underground construction. The first exception was the Taiya River crossing where the current bridge in the Dyea Valley is near the end of its useful life with Alaska DOT/PF planning to replace the bridge in next ten years. The NPS and the State of Alaska conditionally allowed AP&T to cross the river with overhead construction with the understanding that when the bridge is replaced we will attach to the new bridge and remove the overhead lines. The second exception is the approximate two mile section of the Dyea Road affected by construction and flooding in 2005 which forced AP&T to place cable-in-conduit on the ground on City of Skagway municipal entitlement land adjacent to the Dyea Road. Placing the cable-in-conduit underground in the road prism would have been too costly and within 3 years would have had to be removed when the AKDOT relocated an upgraded roadway. AP&T currently has a 3-5 year utility easement permit from AKDOT that allows access City property adjacent to the Dyea Road. Once and if another road project gets funded AP&T plans to place the conduit underground in the roadway. Additional funding sources will be sought at the time a road project is announced by AKDOT to enable a permanent installation of the conduit.

**Activities:**

Construction of the Dyea Line Extension started in the spring of 2002. The first phase of the project was overhead construction for a distance of approximately 1 mile. This overhead section was permitted by AKDOT and approved by the NPS and this construction ended at a point that didn't allow the overhead construction to be seen from the Dyea Valley. The next phase was to be underground construction and the type of underground terrain in the area required drilling and blasting. The drilling was completed for a distance of approximately 4,000 feet when the project was halted due to company financial issues. Resumption of this project did not start until 2005 and power from the Skagway grid was connected to Dyea in December 2005. Between December 2002 and December 2005, Dyea was provided power by AP&T diesel generator sets that were located in Dyea. The additional costs in 2006 were incurred for the removal of the diesel generators, replacement of the reactor and the re-conductoring of the Dyea substation line. There are no remaining construction items open on this project. The project will be re-opened when AKDOT installs a new bridge over the Taiya River and/or when a Dyea Road upgrade project is initiated which will allow placement of the underground cable in the roadway prism.

**Project Cost:**

AEA Grant	\$247,126
AEA Power Projects Loan Fund	\$197,479
Alaska Power & Telephone	\$
Total Project Budget	<u>\$444,605</u>
Labor Costs	\$119,767
Direct Materials	\$202,762
Other Materials	\$93,665
Vehicle Costs	\$21,718
Total Project Cost	<u>\$437,912</u>

**Project Outcomes:**

The Dyea valley now receives stable commercial power and telephone service not previously available. This also reduces power costs to the community.

**Problems Encountered:**

Out of season high water events over a 2 week period in November 2005 changed how we completed the project and have left us with exposure to significant costs, somewhere in the future. The line will have to be relocated from its current, temporary position to its permanent one when the road upgrade project is initiated.

**Conclusions and Recommendations:**

The road project will be funded by the State of Alaska and AP&T will need to work closely with the State to ensure that their project includes consideration for cable in conduit relocation.